

REMARKS:

Applicant thanks the Examiner for the Office Action of October 21, 2003, which has been studied with interest and care.

Claims 1, 3, 4, 6, 8-18 and 22 are rejected under 25 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 3, 4, 6 and 8-18 are rejected under 35 USC 103(a) as being unpatentable over Hiroshi (JP Application 06219464) (hereinafter, Hiroshi).

Claim 11 is rejected under 35 USC 103(a) as being unpatentable over Hiroshi in view of Hardt (U.S. Patent No. 4328905) (hereinafter, Hardt).

Claims 1, 3, 4, 6 and 9-18 are rejected under 35 USC 103(a) as being unpatentable over Shull (U.S. Patent No. 4531649) (hereinafter, Shull).

Claims 1, 3, 6 and 9 are rejected under 35 USC 103(a) as being unpatentable over Revill (GB 2132392) (hereinafter, Revill).

I. Claim rejections under 35 USC 112, second paragraph

Claims 1, 3, 4, 6, 10-11, 13-15, 17-18 and 22 are rejected under 25 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant has amended Claims 1, 3, 4, 6, 8-18 and 22. The foregoing claims have been amended to improve their form only. All the claim language objections of the Office Action have been considered and the claims amended accordingly. For example, claims have been amended to correct lack of antecedent basis, redundancy, and awkwardness. Lastly, the amended claims do not add new subject matter.

II. Claim rejections under 35 USC 103 based on obviousness

It is noted that the remaining claims in the application have been considered unpatentable under 35 U.S.C. § 103 for obviousness reasons.

Claims 1, 3, 4, 6 and 8-18 are rejected under 35 USC 103(a) as being unpatentable over Hiroshi (JP Application 06219464) (hereinafter, Hiroshi).

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Claims 1, 3, 6 and 9 are rejected under 35 USC 103(a) as being unpatentable over Revill (GB 2132392) (hereinafter, Revill).

A. There is no prima facie case of obviousness

The MPEP 2142 states that:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one skill in the art, to modify the reference or to combine, reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teachings or suggestion to make the claimed combination and the reasonable expectation of success must *both be found in the prior art, and not based on applicant's disclosure* (emphasis added). *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 2143 – 2143.03.

The following detailed discussion will establish that the Office Action has not established a prima facie case of obviousness.

B. In re Lee states that under the Administrative Procedure Act, the Office is not relieved of the obligation to develop an evidentiary basis for its findings.

In In re Lee, the Board erred by not comporting with legal requirements for determining that Lee's invention was obvious over the prior art. That is, the Board held "[t]hat it was not necessary to present a source of the teaching, suggestion, or motivation to combine these references or their

teachings.” In re Lee, 277 F.3d 1338, 1341 (Fed. Cir. 2002) (copy attached). Further, the Board adopted the Examiner’s obviousness rejection that the two prior art references cited during prosecution “would have been obvious to one of ordinary skill in the art” without further discussion of what that might be. In fact, the Board erred when it further stated that “a specific hint or suggestion of motivation to combine was not required (emphasis added);” and that “[t]he conclusion of obviousness may be made from common knowledge and common sense a person of ordinary skill in the art *without any specific hint or suggestion in the particular reference*(emphasis added).” Id. Thus, the fact that on appeal, the Board’s decision was reversed establishes that the Office has to *particularly mention some suggestion or motivation in the reference or how* one ordinary skill in the art would modify the teachings of the prior art. Id.

Similar to the prosecution of Lee’s application, the Office in the instant application does not particularly state how one skilled in the art might modify the teachings of the prior art (Hiroshi; Hiroshi in view of Hardt; Shull; and Revill). The Office simply stated that although “Hiroshi is silent regarding the spacing between the laminar member and the flexible membrane. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the spacing between the laminar member and the flexible membrane less than the maximum possible extension of the deformable member towards the laminar member to prevent rupture of the flexible member due to excessive pressure within the closed can.” (p. 3, part 3 of Office Action). However, detailed review of Hiroshi does not disclose or teach that the distance between the laminar member and the flexible membrane is significant. Similarly, Hardt, Shull and Revill are also missing any suggestion to combine or modify the claimed invention.

Again, Hiroshi, Shull and Revill do not teach or disclose that the spacing between the laminar member and the flexible membrane is less than the maximum possible extension of the deformable member towards the laminar member. This is the subject of the instant invention and not that of the prior art. Thus, in effect the Office improperly finds suggestion or

motivation in the prior art *based on the Applicant's disclosure*, and under 35 USC 103 this is an improper obviousness rejection.

For example, Hiroshi discloses the importance of the flexible membrane being capable of maintaining its form under high pressure (i.e. temperatures of 100°C or over), but it does not teach or suggest that the distance of the laminar member from the flexible membrane assists in this process (p.2, lines 24-30 of translated Hiroshi application). Moreover, Hiroshi is combined with Hardt to reject claim 11. Hardt teaches a membrane closure having a pull-tab hingedly attached thereto. However, Claim 11 is dependent on Claim 1 of the claimed invention, and since Hiroshi fails to teach all aspects of amended Claim 1, Hiroshi in view of Hardt does not remedy the deficits of Hiroshi alone.

In contrast to the prior art, amended Claim 1, part (iv) and (v) of the claimed invention specifically recites the following (underlining and brackets are not shown):

- (iii) a rigid cap having a resiliently deformable member juxtaposed to the flexible membrane such that when the cap is in use, the flexible membrane is pressed against the container in the vicinity of the seal,
- (iv) the rigid cap further having a first cam and follower pair, which when in use is engaged with a second cam and follower pair located on the container neck, relative movement between the first and second cam and follower pairs in a predetermined direction causes the rigid cap and the container neck to approach one another, thereby increasing the pressure exerted by the deformable member on the flexible membrane; and
- (v) the rigid cap further having a laminar member and an annular skirt, the skirt extending downwardly from the laminar member, and the second cam and follower pair is secured on an upper wall of the skirt,
wherein the laminar member is spaced from the flexible membrane by a distance less than the maximum possible extension of the flexible membrane towards the laminar member.

The claimed invention recites that when the first and second cam and follower pairs on the rigid cap and container neck are fastened/tightened, the laminar member of the rigid cap increases the pressure exerted and that this

juxtaposes the laminar member next to the flexible membrane by a distance less than the maximum possible extension of the flexible membrane towards the laminar member. These elements are not suggested by the prior art.

Hence, the Office has not shown that there is a prima facie case of obviousness because as stated above, the prior art references, alone or in combination, do not teach, nor suggest the claimed invention, which is a container comprising various elements including a laminar member being juxtaposed against the flexible membrane. Further, one of ordinary skill in the art is not motivated to modify the prior art references in the absence of such suggestion. Secondly, there can be no reasonable expectation of success if there is not some suggestion or motivation in any of the prior art. Lastly, alone or combined, the prior art references do not teach *all* the claim limitations. A rejection of obviousness cannot be hindsight use of the Applicant's disclosure, obviousness must be found in the prior art.

Therefore, the Office must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious." Id. Since, the rejection failed to mention the suggestion of the claimed combination or modification of the same, under Lee, the Office Action falls short of this requirement and Applicant respectfully asks for reconsideration of allowance of the pending claims.

C. Whether a motivation to combine prior art references has been demonstrated is a question of fact.

In McGinley v. Franklin Sports Inc., the Federal Circuit court reversed the district court's grant of JMOL in favor of Franklin Sports Inc., (FSI) and ordered the jury's verdict in favor of McGinley reinstated; thus finding that McGinley's invention was not obvious over the prior art alone or in combination. McGinley v. Franklin Sports Inc., 262 F.3d 1339, 1358; 60 U.S.P.Q.2d 1001 (Fed. Cir. 2001). McGinley's invention was a baseball with finger markings (or "finger placement indicia") to guide the user in grasping the ball for throwing different pitches. Id., at 1343. FSI argued that "it would have been obvious to one of ordinary skill in the art to substitute the finger

marks of the Morgan patent for the marks of the Pratt patent,” and arriving at McGinley invention, thereby making McGinley’s invention obvious. McGinley countered with their own facts to state a claim for nonobviousness and why a person of ordinary skill in the art would not “find a suggestion to combine in the teachings of an exemplar prior art.” Id., at 1341.

The jury agreed with McGinley, in effect, that McGinley’s invention was only obvious over the prior art based on McGinley’s disclosure. That is, only with the improper use of “hindsight,” would one of ordinary skill in the art be motivated to combine the prior art.

Similarly, in the instant application, the limiting element of amended Claim 1 reciting that “the laminar member is spaced from the flexible membrane by a distance less than the maximum possible extension of the flexible membrane towards the laminar member,” is based on the Applicant’s disclosure and not that suggested or motivated by the prior art references of Hiroshi, or Hiroshi in view of Hardt, or Shull or Revill. None of the prior art references (alone or in combination) ever suggests that the distance between the laminar member and the flexible membrane is an issue.

Hence, the Office has not shown a prima facie case of obviousness over the prior art. First, because absent any suggestions in the prior art, there can be no motivation to modify or to combine. Secondly, if there is no suggestion or motivation to combine, then there can be no expectation of success. Lastly, the prior art (alone or in combination) do not teach or suggest all the claim limitations. A rejection of obviousness cannot be based on that of the Applicant’s disclosure, obviousness must be found in the prior art. Therefore, Applicant respectfully request for reconsideration of allowance of the pending claims.

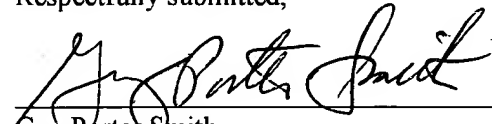
CONCLUSIONS

For the foregoing reasons, Applicant submits that all claims as currently presented are allowable over the prior art. The amendments made in this response are not for reasons of patentability, rather they are made for definiteness and clarity under 35 USC 112, second paragraph. Further, the amended claims do not add new subject matter.

If for any reason the Examiner finds the application other than in condition for allowance, Applicant encourages the Examiner to telephone Applicant's undersigned representative at 310-319-5414 to discuss the steps necessary for placing the application in condition for allowance.

Applicant hereby authorizes the Commissioner to charge a one-month extension and any additional fees, which may be required, or credit any overpayment to Deposit Account No. 16-2230 (Reference #350013-65).

Respectfully submitted,



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Dated: February 12, 2004

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277 F.3d 1338
61 U.S.P.Q.2d 1430
(Cite as: 277 F.3d 1338)
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United States Court of Appeals,
Federal Circuit.

In re SANG-SU LEE.

No. 00-1158.

Jan. 18, 2002.

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patent Board of Patent Appeals and Interferences rejected all claims of inventor's
application directed toward method of automatically displaying functions of video
display device that demonstrated how to select and adjust functions in order to
facilitate response by user. Inventor appealed. The Court of Appeals, Pauline
Newman, Circuit Judge, held that analysis by Board did not comport with either
legal requirements for determination of obviousness or with requirements of
Administrative Procedure Act (APA).
Vacated and remanded.

West Headnotes

[1] Patents k113(6)
291k113(6) Most Cited Cases

Tribunals of the Patent and Trademark Office (PTO) are governed by the
Administrative Procedure Act (APA), and their rulings receive the same judicial
deference as do tribunals of other administrative agencies. 5 U.S.C.A. <section>
551 et seq.

[2] Administrative Law and Procedure k485
15Ak485 Most Cited Cases

[2] Administrative Law and Procedure k507
15Ak507 Most Cited Cases

For judicial review to be meaningfully achieved within the strictures of the
Administrative Procedures Act (APA), an agency tribunal must present a full and
reasoned explanation of its decision; the agency tribunal must set forth its
findings and the grounds thereof, as supported by the agency record, and explain

its

application of the law to the found facts. 5 U.S.C.A. <section> 706(2).

[3] Patents k113(6)
291k113(6) Most Cited Cases

Judicial review of a decision of the Board of Patent Appeals and Interferences denying an application for a patent is founded on the obligation of the agency to make the necessary findings and to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusions. 5 U.S.C.A. <section> 551 et seq.

[4] Patents k31.1
291k31.1 Most Cited Cases

As applied to the determination of patentability vel non when the issue is obviousness, it is fundamental that the rejection of a patent application must be based on evidence comprehended by the language of the statute addressing obviousness. 35 U.S.C.A. <section> 103.

[5] Patents k16.5(1)
291k16.5(1) Most Cited Cases

when The patent examination process centers on prior art and the analysis thereof; patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. 35 U.S.C.A. <section> 103.

[6] Patents k26(1)
291k26(1) Most Cited Cases

In the context of an obviousness determination by the Board of Patent Appeals and Interferences, the factual inquiry whether to combine references must be thorough and searching; it must be based on objective evidence of record. 35 U.S.C.A. <section> 103.

[7] Patents k111
291k111 Most Cited Cases

Analysis of invention by Board of Patent Appeals and Interferences did not comport with either legal requirements for determination of obviousness or with requirements of Administrative Procedure Act (APA) on basis that agency tribunal did not set forth findings and explanations needed for reasoned decisionmaking; examiner used conclusory statements to support his subjective belief that it was obvious that person skilled in the art would have been motivated to combine prior art, and Board rejected need for any specific hint or suggestion in particular reference to support combination of prior art. 5 U.S.C.A. <section> 706(2); 35 U.S.C.A. <section> 103.

[8] Patents k26(1)
291k26(1) Most Cited Cases

prior In an obviousness determination, the factual question of motivation to combine art is material to patentability, and cannot be resolved on subjective belief and unknown authority. 35 U.S.C.A. <section> 103.

[9] Patents k26(1)
291k26(1) Most Cited Cases

[9] Patents k111

291k111 Most Cited Cases

simply
Patent
made,
(2)

In an obviousness determination under patent law, it is improper, in determining whether a person of ordinary skill would have been led to combine references, to use that which the inventor taught against its teacher; thus, the Board of Appeals and Interferences must not only assure that the requisite findings are based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. 5 U.S.C.A. <section> 706 ; 35 U.S.C.A. <section> 103.

[10] Administrative Law and Procedure k507
15Ak507 Most Cited Cases

<section>

Deferential judicial review under the Administrative Procedure Act (APA) does not relieve the agency of its obligation to develop an evidentiary basis for its findings; to the contrary, the APA reinforces this obligation. 5 U.S.C.A. 706(2).

[11] Administrative Law and Procedure k763
15Ak763 Most Cited Cases

[11] Administrative Law and Procedure k796
15Ak796 Most Cited Cases

by

In the context of judicial review under the Administrative Procedure Act (APA), a decision by an agency tribunal that has an omission of a relevant factor required precedent is both legal error and "arbitrary agency action." 5 U.S.C.A. <section> 551 et seq.

[12] Administrative Law and Procedure k485
15Ak485 Most Cited Cases

[12] Administrative Law and Procedure k760
15Ak760 Most Cited Cases

The foundation of the principle of judicial deference under the Administrative Procedures Act (APA) to the rulings of agency tribunals is that the tribunal has specialized knowledge and expertise, such that when reasoned findings are made, a reviewing court may confidently defer to the agency's application of its knowledge in its area of expertise; however, reasoned findings are critical to the performance of agency functions and judicial reliance on agency competence. 5 U.S.C.A. <section> 706(2).

[13] Patents k16(1)
291k16(1) Most Cited Cases

one

The determination of patentability on the ground of unobviousness is ultimately of judgment; in furtherance of the judgmental process, the patent examination procedure serves both to find, and to place on the official record, that which has been considered with respect to patentability. 35 U.S.C.A. <section> 103.

[14] Patents k16(3)
291k16(3) Most Cited Cases

[14] Patents k104
291k104 Most Cited Cases

[14] Patents k111

291k111 Most Cited Cases

of In the context of an obviousness determination, the patent examiner and the Board
Patent Appeals and Interferences are deemed to have experience in the field of the
invention; however, this experience, insofar as applied to the determination of
patentability, must be applied from the viewpoint of the person having ordinary
skill in the art to which said subject matter pertains. 35 U.S.C.A. <section>

103.

[15] Patents k104
291k104 Most Cited Cases

In finding the relevant facts, in assessing the significance of the prior art, and
in making the ultimate determination of the issue of obviousness, the examiner and
the Board of Patent Appeals and Interferences are presumed to act from the
viewpoint

of a person having ordinary skill in the art to which the subject matter pertains;
thus, when they rely on what they assert to be general knowledge to negate
patentability, that knowledge must be articulated and placed on the record and the
failure to do so is not consistent with either effective administrative procedure

or

effective judicial review. 5 U.S.C.A. <section> 706(2); 35 U.S.C.A. <section>

103.

[16] Patents k111
291k111 Most Cited Cases

In the context of an obviousness determination, the Board of Patent Appeals and
Interferences cannot rely on conclusory statements when dealing with particular
combinations of prior art and specific claims, but must set forth the rationale on
which it relies. 5 U.S.C.A. <section> 706(2); 35 U.S.C.A. <section> 103.

[17] Administrative Law and Procedure k326
15Ak326 Most Cited Cases

[17] Administrative Law and Procedure k485
15Ak485 Most Cited Cases

[17] Administrative Law and Procedure k507
15Ak507 Most Cited Cases

Sound administrative procedure requires that an agency apply the law in accordance
with statute and precedent; the agency tribunal must make findings of relevant
facts, and present its reasoning in sufficient detail that the court may conduct
meaningful review of the agency action. 5 U.S.C.A. <section> 706(2).

Patents k328(2)
291k328(2) Most Cited Cases

4,626,892. Cited As Prior Art.

the ^{*134} Richard H. Stern, of Washington, DC, argued for Sang Su Lee. With him on
brief was Robert E. Bushnell.

the

Sidney O. Johnson, Jr., Associate Solicitor, of Arlington, Virginia, argued for
Director of the U.S. Patent and Trademark Office. With him on the brief were John
M. Whealan, Solicitor, and Raymond T. Chen, Associate Solicitor. Of counsel were
Maximilian R. Peterson and Mark Nagumo, Associate Solicitors.

Before PAULINE NEWMAN, CLEVINGER, and DYK, Circuit Judges.

PAULINE NEWMAN, Circuit Judge.

Sang-Su Lee appeals the decision of the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office, rejecting all of the claims of Lee's patent application Serial No. 07/631,210 entitled "Self-Diagnosis and Sequential-Display Method of Every Function." [FN1] We vacate the Board's decision for failure to meet the adjudicative standards for review under the Administrative Procedure Act, and remand for further proceedings.

FN1. Ex parte Lee, No.1994-1989 (Bd. Pat.App. & Int. Aug. 30, 1994; on reconsid'n Sept. 29, 1999).

The Prosecution Record

Mr. Lee's patent application is directed to a method of automatically displaying the functions of a video display device and demonstrating how to select and adjust the functions in order to facilitate response by the user. The display and demonstration are achieved using computer-managed electronics, including pulse-

modulation and auto-fine-tuning pulses, in accordance with procedures described in the specification. Claim 10 is representative:

10. A method for automatically displaying functions of a video display device, comprising:

determining if a demonstration mode is selected;

if said demonstration mode is selected, automatically entering a picture

mode having a picture menu screen displaying a list of a plurality of picture functions; and

automatically demonstrating selection and adjustment of individual ones of said plurality of picture functions.

The examiner rejected the claims on the ground of obviousness, citing the combination of two references: United States Patent No. 4,626,892 to Nortrup, and the Thunderchopper Helicopter Operations *1341 Handbook for a video game. The Nortrup reference describes a television set having a menu display by which the

can adjust various picture and audio functions; however, the Nortrup display does not include a demonstration of how to adjust the functions. The Thunderchopper Handbook describes the Thunderchopper game's video display as having a "demonstration mode" showing how to play the game; however, the Thunderchopper Handbook makes no mention of the adjustment of picture or audio functions. The examiner held that it would have been obvious to a person of ordinary skill to combine the teachings of these references to produce the Lee system.

Lee appealed to the Board, arguing that the Thunderchopper Handbook simply explained how to play the Thunderchopper game, and that the prior art provided no teaching or motivation or suggestion to combine this reference with Nortrup, or

such combination would produce the Lee invention. The Board held that it was not necessary to present a source of a teaching, suggestion, or motivation to combine these references or their teachings. The Board stated:

The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

Board op. at 7. The Board did not explain the "common knowledge and common

on which it relied for its conclusion that "the combined teachings of Nortrup and Thunderchopper would have suggested the claimed invention to those of ordinary skill in the art."

Lee filed a request for reconsideration, to which the Board responded after five years. The Board reaffirmed its decision, stating that the Thunderchopper

Handbook

was "analogous art" because it was "from the same field of endeavor" as the Lee invention, and that the field of video games was "reasonably pertinent" to the problem of adjusting display functions because the Thunderchopper Handbook showed video demonstrations of the "features" of the game. On the matter of motivation

to

combine the Nortrup and Thunderchopper references, the Board stated that "we maintain the position that we stated in our prior decision" and that the

Examiner's

Answer provided "a well reasoned discussion of why there is sufficient motivation

to

combine the references." The Board did not state the examiner's reasoning, and review of the Examiner's Answer reveals that the examiner merely stated that both the Nortrup function menu and the Thunderchopper demonstration mode are program features and that the Thunderchopper mode "is user-friendly" and it functions as a tutorial, and that it would have been obvious to combine them.

Lee had pressed the examiner during prosecution for some teaching, suggestion, or motivation in the prior art to select and combine the references that were relied

on

to show obviousness. The Examiner's Answer before the Board, plus a Supplemental Answer, stated that the combination of Thunderchopper with Nortrup "would have

been

obvious to one of ordinary skill in the art since the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software," and that

"another

motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial." The Board adopted the examiner's answer, stating "the examiner has provided a well reasoned discussion of these references and how the combination of these references meets the claim limitations." However, perhaps recognizing that the examiner had provided insufficient justification to *1342 support combining the Nortrup and Thunderchopper references, the Board held, as stated supra, that a "specific hint or suggestion" of motivation to combine was

not

required.

This appeal followed.

Judicial Review

[1] Tribunals of the PTO are governed by the Administrative Procedure Act, and their rulings receive the same judicial deference as do tribunals of other administrative agencies. Dickinson v. Zurko, 527 U.S. 150, 119 S.Ct. 1816, 144 L.Ed.2d 143, 50 USPQ2d 1930 (1999). Thus on appeal we review a PTO Board's

findings

and conclusions in accordance with the following criteria:

5 U.S.C. <section> 706(2) The reviewing court shall--

(2) hold unlawful and set aside agency actions, findings, and conclusions found

to

be--

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

* * * * *

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided

by

statute;

[2][3] For judicial review to be meaningfully achieved within these strictures,

the

agency tribunal must present a full and reasoned explanation of its decision. The agency tribunal must set forth its findings and the grounds thereof, as supported

by the agency record, and explain its application of the law to the found facts. The Court has often explained:

The Administrative Procedure Act, which governs the proceedings of administrative agencies and related judicial review, establishes a scheme of "reasoned decisionmaking." Not only must an agency's decreed result be within the scope of its lawful authority, but the process by which it reaches that result must be logical and rational.

Allentown Mack Sales and Service, Inc. v. National Labor Relations Bd., 522 U.S. 359, 374, 118 S.Ct. 818, 139 L.Ed.2d 797 (1998) (citation omitted). This standard requires that the agency not only have reached a sound decision, but have articulated the reasons for that decision. The reviewing court is thus enabled to perform meaningful review within the strictures of the APA, for the court will

have a basis on which to determine "whether the decision was based on the relevant factors and whether there has been a clear error of judgment." Citizens to

Preserve Overton Park v. Volpe, 401 U.S. 402, 416, 91 S.Ct. 814, 28 L.Ed.2d 136 (1971). Judicial review of a Board decision denying an application for patent is thus founded on the obligation of the agency to make the necessary findings and to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusions. See In

re Zurko, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed.Cir.2001) (review is on the administrative record); In re Gartside, 203 F.3d 1305, 1314, 53 USPQ2d 1769, 1774 (Fed.Cir.2000) (Board decision "must be justified within the four corners of the record").

[4][5] As applied to the determination of patentability vel non when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. <section> 103 must be based on evidence comprehended by the language of that section." In re

Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed.Cir.1983). The essential factual

evidence on the issue of obviousness is set forth in Graham v. John Deere Co., 383 U.S. 1, 17-18, 86 S.Ct. 684, 15 L.Ed.2d 545, 148 USPQ 459, 467 (1966) and extensive

ensuing precedent. The patent examination *1343 process centers on prior art and the analysis thereof. When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine

the references relied on as evidence of obviousness. See, e.g., McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed.Cir.2001) ("the central question is whether there is reason to combine [the] references," a

question of fact drawing on the Graham factors).

[6] "The factual inquiry whether to combine references must be thorough and searching." Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed.Cir.2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding' ") (quoting C.R. Bard, Inc. v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed.Cir.1998)); In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.Cir.1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based

obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."); In re Dance, 160 F.3d 1339, 1343,

USPQ2d 1635, 1637 (Fed.Cir.1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by

the

applicant); In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed.Cir.1988)

("

'teachings of references can be combined only if there is some suggestion or incentive to do so.' ") (emphasis in original) (quoting ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed.Cir.1984)).

The need for specificity pervades this authority. See, e.g., In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed.Cir.2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459

(Fed.Cir.1998)

("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and

to

combine them to render the claimed invention obvious."); In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed.Cir.1992) (the examiner can satisfy the

burden

of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references").

[7][8][9] With respect to Lee's application, neither the examiner nor the Board adequately supported the selection and combination of the Nortrup and

Thunderchopper

references to render obvious that which Lee described. The examiner's conclusory statements that "the demonstration mode is just a programmable feature which can

be

used in many different device[s] for providing automatic introduction by adding

the

proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do

not

adequately address the issue of motivation to combine. This factual question *

1344

of motivation is material to patentability, and could not be resolved on

subjective

belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed.Cir.1983). Thus the Board

must

not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support

the

agency's conclusion.

[10] Deferential judicial review under the Administrative Procedure Act does not relieve the agency of its obligation to develop an evidentiary basis for its findings. To the contrary, the Administrative Procedure Act reinforces this obligation. See, e.g., Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Ins. Co., 463 U.S. 29, 43, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983) ("the agency must examine the relevant data and articulate a satisfactory explanation

for

its action including a 'rational connection between the facts found and the choice made.' ") (quoting Burlington Truck Lines v. United States, 371 U.S. 156, 168, 83 S.Ct. 239, 9 L.Ed.2d 207 (1962)); Securities & Exchange Comm'n v. Chenery Corp., 318 U.S. 80, 94, 63 S.Ct. 454, 87 L.Ed. 626 (1943) ("The orderly function of the process of review requires that the grounds upon which the administrative agency

acted are clearly disclosed and adequately sustained.").

[11] In its decision on Lee's patent application, the Board rejected the need for "any specific hint or suggestion in a particular reference" to support the combination of the Nortrup and Thunderchopper references. Omission of a relevant factor required by precedent is both legal error and arbitrary agency action. See Motor Vehicle Manufacturers, 463 U.S. at 43, 103 S.Ct. 2856 ("an agency rule would be arbitrary and capricious if the agency ... entirely failed to consider an important aspect of the problem"); Mullins v. Department of Energy, 50 F.3d 990, 992 (Fed.Cir.1995) ("It is well established that agencies have a duty to provide reviewing courts with a sufficient explanation for their decisions so that those decisions may be judged against the relevant statutory standards, and that failure to provide such an explanation is grounds for striking down the action."). As discussed in National Labor Relations Bd. v. Ashkenazy Property Mgt. Corp., 817

F.2d

74, 75 (9th Cir.1987), an agency is "not free to refuse to follow circuit precedent."

agency

[12] The foundation of the principle of judicial deference to the rulings of tribunals is that the tribunal has specialized knowledge and expertise, such that when reasoned findings are made, a reviewing court may confidently defer to the agency's application of its knowledge in its area of expertise. Reasoned findings are critical to the performance of agency functions and judicial reliance on

agency

competence. See Baltimore and Ohio R.R. Co. v. Aberdeen & Rockfish R.R. Co., 393 U.S. 87, 91-92, 89 S.Ct. 280, 21 L.Ed.2d 219 (1968) (absent reasoned findings

based

on substantial evidence effective review would become lost "in the haze of so-

called

expertise"). The "common knowledge and common sense" on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation. This court explained

in

Zurko, 258 F.3d at 1385, 59 USPQ2d at 1697, that "deficiencies of the cited references cannot be remedied by the Board's general conclusions about what is 'basic knowledge' or 'common sense.'" The *1345 Board's findings must extend to

all

material facts and must be documented on the record, lest the "haze of so-called expertise" acquire insulation from accountability. "Common knowledge and common sense," even if assumed to derive from the agency's expertise, do not substitute

for

authority when the law requires authority. See Allentown Mack, 522 U.S. at 376,

118

S.Ct. 818 ("Because reasoned decisionmaking demands it, and because the systemic consequences of any other approach are unacceptable, the Board must be required to apply in fact the clearly understood legal standards that it enunciates in principle....")

the

The case on which the Board relies for its departure from precedent, In re Bozek, 57 C.C.P.A. 713, 416 F.2d 1385, 163 USPQ 545 (1969), indeed mentions "common knowledge and common sense," the CCPA stating that the phrase was used by the Solicitor to support the Board's conclusion of obviousness based on evidence in

Circuit

prior art. Bozek did not hold that common knowledge and common sense are a substitute for evidence, but only that they may be applied to analysis of the evidence. Bozek did not hold that objective analysis, proper authority, and reasoned findings can be omitted from Board decisions. Nor does Bozek, after thirty-two years of isolation, outweigh the dozens of rulings of the Federal

must

and the Court of Customs and Patent Appeals that determination of patentability be based on evidence. This court has remarked, in Smiths Industries Medical Systems, Inc. v. Vital Signs, Inc., 183 F.3d 1347, 1356, 51 USPQ2d 1415, 1421

(Fed.Cir.1999), that Bozek 's reference to common knowledge "does not in and of itself make it so" absent evidence of such knowledge.

[13][14][15][16] The determination of patentability on the ground of unobviousness is ultimately one of judgment. In furtherance of the judgmental process, the patent examination procedure serves both to find, and to place on the official record, that which has been considered with respect to patentability. The patent examiner and the Board are deemed to have experience in the field of the invention; however, this experience, insofar as applied to the determination of patentability, must be applied from the viewpoint of "the person having ordinary skill in the art to which said subject matter pertains," the words of section 103. In finding the relevant facts, in assessing the significance of the prior art, and in making the ultimate determination of the issue of obviousness, the examiner and the Board are presumed to act from this viewpoint. Thus when they rely on what they assert to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. The failure to do so is not consistent with either effective administrative procedure or effective judicial review. The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.

Alternative Grounds

At oral argument the PTO Solicitor proposed alternative grounds on which this court might affirm the Board's decision. However, as stated in Burlington Truck Lines, Inc. v. United States, 371 U.S. 156, 168, 83 S.Ct. 239, 9 L.Ed.2d 207 (1962), "courts may not accept appellate counsel's post hoc rationalization for agency action." Consideration by the appellate tribunal of new agency justifications deprives the aggrieved party of a fair opportunity to support its position; thus review of an administrative decision must be made on the grounds relied on by the agency. "If those grounds are inadequate or improper, the court is powerless to affirm the administrative action by substituting what it considers *1346 to be a more adequate or proper basis." Securities & Exchange Comm'n v. Chenery Corp., 332 U.S. 194, 196, 67 S.Ct. 1575, 91 L.Ed. 1995 (1947). As reiterated in Federal Election Comm'n v. Akins, 524 U.S. 11, 25, 118 S.Ct. 1777, 141 L.Ed.2d 10 (1998), "If a reviewing court agrees that the agency misinterpreted the law, it will set aside the agency's action and remand the case--even though the agency (like a new jury after a mistrial) might later, in the exercise of its lawful discretion, reach the same result for a different reason." Thus we decline to consider alternative grounds that might support the Board's decision.

Further Proceedings

[17] Sound administrative procedure requires that the agency apply the law in accordance with statute and precedent. The agency tribunal must make findings of relevant facts, and present its reasoning in sufficient detail that the court may conduct meaningful review of the agency action. In Radio- Television News Directors Ass'n v. FCC, 184 F.3d 872 (D.C.Cir.1999) the court discussed the "fine line between agency reasoning that is 'so crippled as to be unlawful' and action that is potentially lawful but insufficiently or inappropriately explained," quoting from Checkosky v. Securities & Exch. Comm'n, 23 F.3d 452, 464 (D.C.Cir.1994); the court explained that "[i]n the former circumstance, the court's practice is to vacate the agency's order, while in the latter the court frequently remands for further explanation (including discussion of the relevant factors and precedents) while

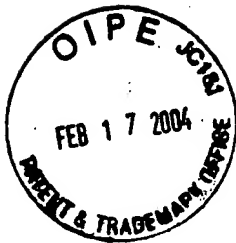
withholding judgment on the lawfulness of the agency's proposed action." Id. at 888. In this case the Board's analysis of the Lee invention does not comport with either the legal requirements for determination of obviousness or with the requirements of the Administrative Procedure Act that the agency tribunal set

forth
these
the findings and explanations needed for "reasoned decisionmaking." Remand for purposes is required. See Overton Park, 401 U.S. at 420-421, 91 S.Ct. 814 (remanding for further proceedings appropriate to the administrative process).

VACATED AND REMANDED.

277 F.3d 1338, 61 U.S.P.Q.2d 1430

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TECHNOLOGY CENTER R3700

United States Court of Appeals
Federal Circuit.

Michael L. McGINLEY, Plaintiff-Appellant,
v.
FRANKLIN SPORTS, INC., Defendant-Cross Appellant.

Nos. 00-1324, 01-1113.

Aug. 21, 2001.

Rehearing and Rehearing En Banc Denied Oct. 17, 2001.

Patentee brought action against alleged infringer relating to patent on instructional pitching device in the form of a regulation baseball with specific "finger placement indicia" for teaching students how to grasp a baseball for throwing different types of pitches. The United States District Court for the District of Kansas, John W. Lungstrum, J., granted judgment of invalidity, 92 F.Supp.2d 1216. Patentee appealed. The Court of Appeals, Clevenger, Circuit Judge, held that: (1) doctrine of equivalents applied to patentee's claim limitation; (2) alleged infringer's finger-shaped markings on accused baseball were structural equivalents of tapered egg-shaped indicia described in patent; and (3) patentee presented sufficient evidence for jury to conclude that patent claims based on combination of prior art were not obvious.

Reversed in part and affirmed in part.

Michel, Circuit Judge, filed a dissenting opinion.

West Headnotes

[1] Patents k324.5
291k324.5 Most Cited Cases

to Court of Appeals resolves patent claim interpretation disputes without deference
the district court.

[2] Patents k237
291k237 Most Cited Cases

that Doctrine of equivalents applied to patentee's claim limitation, in patent relating to "finger placement indicia" on baseball; although alleged infringer asserted claim limitation was not entitled to any range of equivalents whatsoever, patentee was statutorily guaranteed a range of equivalents extending beyond that which was explicitly disclosed in the patent document itself. 35 U.S.C.A. <section> 112.

[3] Patents k226.7
291k226.7 Most Cited Cases

range Drafters of means-plus-function claim limitations are statutorily guaranteed a of equivalents extending beyond that which is explicitly disclosed in the patent document itself. 35 U.S.C.A. <section> 112.

[4] Patents k237
291k237 Most Cited Cases

Alleged infringer's finger-shaped markings on accused baseball were structural equivalents of tapered egg-shaped indicia described in patent on instructional pitching device used to teach students how to grasp a baseball for throwing different types of pitches, as an artisan of ordinary skill would have made such a conclusion. 35 U.S.C.A. <section> 112.

[5] Patents k324.5
291k324.5 Most Cited Cases

Court of Appeals reviews de novo a district court's legal conclusion that summary judgment of patent infringement was warranted. Fed.Rules Civ.Proc.Rule 56, 28 U.S.C.A.

[6] Patents k32
291k32 Most Cited Cases

presumption Throughout an obviousness determination, a patent retains its statutory of validity and the movant for judgment of invalidity retains the burden to show the invalidity of the claims by clear and convincing evidence as to underlying facts. 35 U.S.C.A. <section><section> 103(a), 282.

[7] Patents k312(5)
291k312(5) Most Cited Cases

based Patentee presented sufficient evidence for jury to conclude that patent claims on combination of prior art were not obvious, in lawsuit relating to patent on instructional device on baseball, even though alleged infringer presented evidence that combination was obvious.

[8] Patents k314(5)
291k314(5) Most Cited Cases

law, Although the ultimate determination of obviousness of a patent is a question of there are factual issues underlying the ultimate obviousness decision. 35 U.S.C.A. <section> 103(a).

[9] Patents k16(1)
291k16(1) Most Cited Cases

[9] Patents k36.1(1)
291k36.1(1) Most Cited Cases

An obviousness analysis is based on four underlying factual inquiries: (1) the

the scope and content of the prior art; (2) the differences between the claims and
secondary prior art; (3) the level of ordinary skill in the pertinent art; and (4)
considerations, if any, of nonobviousness of the patent. 35 U.S.C.A. <section>
103(a).

[10] Federal Courts k765
170Bk765 Most Cited Cases

to Court of Appeals reviews a grant of judgment as a matter of law without deference
the district court.

[11] Federal Civil Procedure k2603
170Ak2603 Most Cited Cases

[11] Federal Civil Procedure k2608.1
170Ak2608.1 Most Cited Cases

Entry of judgment as a matter of law is inappropriate unless a jury's verdict is
unsupported by substantial evidence or premised on incorrect legal standards.

[12] Patents k324.5
291k324.5 Most Cited Cases

[12] Patents k324.55(4)
291k324.55(4) Most Cited Cases

facts When analyzing the correctness of a judgment as a matter of law overturning a jury
ultimate verdict of nonobviousness of a patent, the Court of Appeals must consider the
before the district court, and then determine whether the district court's
judgment on obviousness is correct as a matter of law; when re-creating the facts
as they may have been found by the jury, and in applying the four factors used in
making an obviousness determination to the evidence of record, the Court of
Appeals assesses the evidence in the light most favorable to the verdict winner. 35
U.S.C.A. <section> 103(a).

[13] Patents k36(1)
291k36(1) Most Cited Cases

obviousness Whether a patent claim is obvious depends upon the answer to several factual
questions and how the factual answers meld into the legal conclusion of
vel non. 35 U.S.C.A. <section> 103(a).

[14] Patents k16(4)
291k16(4) Most Cited Cases

[14] Patents k26(1)
291k26(1) Most Cited Cases

hindsight The genius of invention is often a combination of known elements which in
seems preordained, so, to prevent hindsight invalidation of patent claims, the law
requires some teaching, suggestion, or reason to combine cited references; when
the art in question is relatively simple, the opportunity to judge by hindsight is
particularly tempting, and consequently, the tests of whether to combine
references need to be applied rigorously. 35 U.S.C.A. <section> 103(a).

[15] Patents k16.13
291k16.13 Most Cited Cases

Whether a motivation to combine prior art references has been demonstrated is a question of fact, in the context of a determination of obviousness in a patent.

U.S.C.A. <section> 103(a).

[16] Patents k26(1)
291k26(1) Most Cited Cases

When making a determination of obviousness in a patent, the factual inquiry of whether to combine references must be thorough and searching. 35 U.S.C.A.

<section>

103(a).

[17] Patents k16(1)
291k16(1) Most Cited Cases

[17] Patents k26(1)
291k26(1) Most Cited Cases

The assessment of whether to combine references, in the context of a determination of obviousness in a patent, may be viewed conceptually as a subset of the scope

and content of the prior art factor, in the four-factor obviousness test; however, accurate assessment of whether to combine references may require attention to the other three factors. 35 U.S.C.A. <section> 103(a).

[18] Patents k16(3)
291k16(3) Most Cited Cases

[18] Patents k26(1)
291k26(1) Most Cited Cases

In the context of a determination of obviousness in a patent, the level of skill

in the art may inform whether the artisan would find a suggestion to combine in the teachings of an exemplar of prior art; where the level of skill is high, one may assume a keener appreciation of nuances taught by the prior art, and similarly, appreciation of the differences between the claims in suit and the scope of prior art references, a matter itself informed by the operative level of skill in the

art, informs the question of whether to combine prior art references. 35 U.S.C.A. <section> 103(a).

[19] Patents k16.5(1)
291k16.5(1) Most Cited Cases

In the context of a determination of obviousness in a patent, references that teach away cannot serve to create a prima facie case of obviousness.

[20] Federal Civil Procedure k2608.1
170Ak2608.1 Most Cited Cases

When a jury is supplied with sufficient valid factual information to support the verdict it reaches, the jury's factual conclusion may not be set aside by an order for judgment as a matter of law.

[21] Patents k310.11
291k310.11 Most Cited Cases

Denial of patentee's motion to amend his complaint was warranted, in lawsuit relating to patent on instructional device on baseball, since patentee filed

motion

more than one year after filing his initial complaint and almost two months after deadline that had been set by district court for filing a motion to join

additional

parties. Fed.Rules Civ.Proc.Rule 15, 28 U.S.C.A.

[22] Courts k96(4)
106k96(4) Most Cited Cases

[22] Courts k96(7)
106k96(7) Most Cited Cases

involves District court decision to grant or deny a motion for leave to join a party

a procedural question that raises no special issues relating to patent law, and therefore the law of the circuit in which the district court sits applies.
Fed.Rules Civ.Proc.Rule 15, 28 U.S.C.A.

[23] Federal Courts k817
170Bk817 Most Cited Cases

15, In the Tenth Circuit, a trial court's decision to grant or deny a motion for leave to join a party is reviewed for an abuse of discretion. Fed.Rules Civ.Proc.Rule 28 U.S.C.A.

[24] Federal Civil Procedure k1951
170Ak1951 Most Cited Cases

[24] Federal Civil Procedure k1991
170Ak1991 Most Cited Cases

Trial courts are given broad latitude in managing and scheduling cases.

[25] Patents k324.1
291k324.1 Most Cited Cases

faith Alleged infringer failed to preserve for appeal trial court's alleged error of precluding its corporate representative from testifying as to its alleged good

belief that patent on instructional device on baseball was invalid, on basis that representative was not qualified as an expert, since alleged infringer failed to make offer of proof as to what corporate representative would have said.

Fed.Rules.

Evid.Rule 103, 28 U.S.C.A.; Fed.Rules Civ.Proc.Rule 26, 28 U.S.C.A.

[26] Patents k324.54
291k324.54 Most Cited Cases

discretion In a patent infringement action, the denial of a motion for a new trial by a district court sitting in the Tenth Circuit is a procedural issue not unique to patent law, and is therefore reviewed under the Tenth Circuit's abuse of standard.

Patents k328(2)
291k328(2) Most Cited Cases

2,925,273, 3,110,494. Cited As Prior Art.

Patents k328(2)
291k328(2) Most Cited Cases

5,407,193. Construed.

1342 Kip D. Richards, Walters Bender Strohbehn & Vaughn, P.C., of Kansas City,

MO,

argued for plaintiff-appellant.

Joseph B. Bowman, Shook, Hardy & Bacon L.L.P., of Kansas City, MO, argued for defendant-cross appellant. Of counsel was Daniel P. Devers.

Before MAYER, Chief Judge, MICHEL and CLEVINGER, Circuit Judges.

CLEVINGER, Circuit Judge.

This is a patent infringement suit in which Michael L. McGinley charges Franklin Sports, Inc. ("FSI") with willful infringement of claims 1, 2, 6, and 7 of U.S. Patent No. 5,407,193 ("the '193 patent"). On summary judgment, the United States District Court for the District of Kansas ruled in favor of McGinley on the issue

of

infringement, and the case proceeded to *1343 trial on the issues of validity and willfulness. The jury found that the asserted claims were not invalid and were willfully infringed. On a subsequent motion filed by FSI for judgment as a matter of law ("JMOL"), the trial court set aside the jury verdict on validity, holding that the asserted claims of the '193 patent are invalid as obvious pursuant to 35 U.S.C. <section> 103(a).

McGinley appeals the district court's grant of JMOL of invalidity and the earlier denial of McGinley's motion for leave to amend the complaint to join his business, S.C. Products, Inc. ("SCP"), as an additional plaintiff. On cross-appeal, FSI challenges the district court's grant of summary judgment in favor of McGinley on infringement and the denial of its motion for a new trial on willfulness.

Because we conclude that the district court erred in finding that no reasonable jury could have reached a verdict of nonobviousness, we reverse the JMOL of invalidity. We affirm the district court's rulings in all other respects.

I

Background

The application for the '193 patent was filed on July 3, 1991, and the patent issued on April 18, 1995. In general terms, the '193 patent discloses and claims

an

instructional pitching device in the form of a regulation baseball with specific "finger placement indicia" for teaching students how to grasp a baseball for throwing different types of pitches. With the endorsement of a famous

professional

baseball pitcher, McGinley's invention was marketed and distributed as the Roger Clemens Instructional Baseball ("RCIB"). FSI also manufactured and sold a

baseball

designed to teach students to throw different types of pitches. The accused

device

in this case, the Franklin Pitch Ball Trainer 2705 ("FSI's 2705 baseball"), was

sold

in the United States from at least as early as April 1995 to March 1999.

In the preferred embodiment of the claimed invention, an aspect of which is illustrated in the following figure, three sets of finger placement indicia 11 are positioned on the cover 17 of a regulation baseball 10. Each set of indicia 11 is intended to illustrate the placement of a student pitcher's index and middle

fingers

so as to throw a particular type of pitch (e.g., two-seam fast ball, slider, curve ball, etc.).

*1344

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Indicia 11 are presented in two sizes, to allow the indicia intended for a left-handed student to be easily distinguished from the indicia intended for a right-handed student. The smaller indicia, exemplified by indicia 24 and 26, are intended for use by left-handed pitchers, while the larger indicia, as represented by indicia 20 and 22, are intended for use by right-handed pitchers. Moreover, indicia 11 are coded by coloring all indicia which are representative of a certain type of pitch in one color and indicia representative of another type of pitch in

a particular the indicium correct different color. To further assist a student in learning how to throw a pitch, the indicia are shaped so as to indicate the relationship of the palm of the hand in grasping the ball. Specifically, the portion of each "egg-shaped" indicium to be situated closest to the palm is slightly tapered so as to indicate the orientation of the baseball in the palm. Although the preferred embodiment of the

193 patent makes no provisions for "thumb placement indicia," the written description of the '193 patent repeatedly states that the thumb is generally to be positioned on the baseball at a location opposite the corresponding set of finger placement indicia.

sets indicia curve and of attention McGinley's counsel. As originally filed in 1991, the claims of the '193 patent required that eight of finger placement indicia be provided on a single baseball pitching training device. Specifically, the four original claims all required the presence of demarcating the placement of fingers for four specific types of pitches (i.e., ball, two-seam fast ball, slider, and four-seam fast ball), for both left-handed and right-handed students. These claims were rejected on obviousness grounds in view of U.S. Patent No. 2,925,273 ("Pratt"), which had issued on February 16, 1960, more than thirty years before McGinley's filing date. Pratt was brought to the attention of the Patent and Trademark Office ("PTO") via an Information Disclosure Statement ("IDS") filed concurrently with McGinley's priority patent application by McGinley's counsel.

teaching description blend had Like the claims originally filed by McGinley, Pratt disclosed, inter alia, a conventional baseball having multiple sets of finger placement indicia for teaching baseball players to throw different types of pitches. Specifically, in the embodiment illustrated in Figure 4 (shown below), *1345 Pratt's written description disclosed the placement of finger and thumb placement indicia for three types of pitches (i.e., fast ball, curve ball, and screw ball). Equatorial band 17 was an important feature of Pratt's claimed invention. When a student threw Pratt's baseball correctly, bands of complementary colors in the equatorial band would blend into a single color to provide a visual indication to the student that the ball had been thrown with proper rotation.

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existing and different Although the similarities between Pratt's disclosure and McGinley's then-existing claims are striking, there are also a few differences between Pratt's teachings and McGinley's initially claimed invention. First, Pratt did not provide for different

sets of indicia on a single ball for distinguishing between left-handed and right-handed students. Also, Pratt's finger placement indicia were described and illustrated as being circular, but "phantom lines" illustrating the placement of fingers 21, 22 and thumb 23 were included in the patent figures. These phantom lines, however, are not described in Pratt as actual markings on the baseball. In contrast, the finger placement indicia in the preferred embodiment of McGinley's invention are actually marked on the ball, and are "egg-shaped" and slightly

tapered

at one end to indicate the proper orientation of the ball with respect to the student's palm.

Another prior art reference which was brought to the attention of the PTO via McGinley's IDS was U.S. Patent No. 3,110,494 ("Morgan"), which issued on November 12, 1963. In contrast to Pratt and the '193 patent, which are based on using a conventional regulation baseball, Morgan describes a baseball training device

using

a lightweight and inexpensive baseball "replica" fabricated in the form of plastic or metallic hemispherical shells which occupy a minimum of space before use, but which can be easily assembled by gluing the two hemispherical halves together. In Figure 6 of Morgan (shown below) and the accompanying written description, a

single

set of finger-shaped marks D", E", and L" (for teaching proper placement of the forefinger, middle finger, and thumb, respectively) are provided on the baseball training device to teach a student how to throw a baseball with a particular curve or break.

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Throughout the prosecution history of the '193 patent, McGinley's claims at issue in this case were rejected in view of Pratt on anticipation grounds. With respect to *1346 Morgan, although this reference was before the PTO during the entire pendency of McGinley's patent application, it was never explicitly relied upon as

a

basis for a rejection based on a prima facie case of anticipation or obviousness.

Ultimately, in 1995, after a series of rejections, amendments, and responses (including a partially successful appeal to the Board of Patent Appeals and Interferences and the filing of a continuation application), the '193 patent

issued

with 14 claims. Ten of the issued claims (i.e., claims 3-5 and 8-14) explicitly retain the original limitation requiring the inclusion of finger placement indicia on a single baseball pitching training device for both left-handed and right-

handed

students. These claims were not asserted in this case. Instead, McGinley

asserted

the remaining four claims (i.e., independent claim 1 and dependent claims 2, 6,

and

7) against FSI, alleging willful infringement by making and selling the 2705 baseball. The asserted claims read as follows in their entirety:

1. A baseball pitching training device for duplicating finger placement on a baseball by a student comprising:

a baseball cover;

a plurality of sets of finger placement indicia on said cover, said sets of

indicia

comprising:

a first set of indicia demarcating the placement of finger [sic] for throwing a first pitch;

a second set of indicia demarcating the placement of fingers for throwing, [sic]

a

second pitch;

a third set of indicia demarcating the placement of fingers for throwing a third pitch;

means for indicating the orientation of the baseball relative to the palm of the hand; and

means for coding said finger placement indicia sets for identification of each of

said indicia associated with any one of said sets.

2. The device as claimed in claim 1 wherein said means for coding comprises a color

for association with each indicia of a particular set.

6. The device as claimed in claim 1, wherein said means for indicating orientation

comprises shaping said indicia to distinguish that portion of the baseball to be located proximate to the palm of the hand.

7. The device as claimed in claim 1 wherein said indicia are shaped to indicate a correct orientation of the baseball with respect to the palm of the hand.

'193 patent, col. 5, ll. 29-48; col. 5, ll. 61-64; col. 6, ll. 1-3.

The district court held a Markman hearing on January 21, 1999, and issued an order

construing the disputed claims of the '193 patent shortly thereafter. *McGinley v. Franklin Sports, Inc.*, 45 F.Supp.2d 1141 (D.Kan.1999) (*McGinley I*). On cross-appeal, FSI challenges only the district court's interpretation of the

claimed "means for indicating the orientation of the baseball relative to the palm of the hand." The district court construed the term as a means-plus-function limitation pursuant to 35 U.S.C. <section> 112, <paragraph> 6, and concluded that the corresponding structure included "a slight taper at the portion of each indicia situated closest to the palm of the hand, and any equivalents of such structure." Id. at 1146. FSI's position on appeal is that the claim limitation is not

entitled to any range of equivalents whatsoever.

Based on its claim interpretation, the district court granted McGinley's motion for partial summary judgment on the issue of infringement on October 28, 1999.

McGinley v. Franklin Sports, Inc., 75 F.Supp.2d 1218, 1224-25 (D.Kan.1999) *1347 (*McGinley II*)

). At the same time, however, the district court denied FSI's motion for partial summary judgment on validity, id. at 1225-32, finding disputed issues of material fact with respect to the obviousness issue. The case proceeded to trial, and on January 19, 2000, the jury returned a verdict in favor of McGinley, finding the

'193 patent not invalid and willfully infringed.

FSI then filed a post-trial motion, seeking JMOL on the issues of validity and willfulness. In the alternative, FSI also moved for a new trial. On April 5, 2000, the district court set aside the jury's verdict and granted FSI's motion for JMOL on

invalidity, concluding that "as a matter of law, plaintiff's patent is invalid as obvious in light of Pratt or the combination of Pratt and Morgan." Judgment was entered in favor of FSI, and this appeal followed, vesting us with jurisdiction pursuant to 28 U.S.C. <section> 1295(a)(1).

II

Claim Interpretation

[1] As the first step of the infringement and validity analyses in this case, we resolve any claim interpretation disputes on appeal, without deference to the district court. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343,

1351, 57 USPQ2d 1747, 1751-52 (Fed.Cir.2001); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1174-75 (Fed.Cir.1998) (en banc); *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979, 34 USPQ2d 1321, 1329 (Fed.Cir.1995) (en

banc), aff'd, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577, 38 USPQ2d 1461 (1996).

The only claim interpretation dispute remaining on appeal concerns the limitation in all of the asserted claims requiring "means for indicating the orientation of

the baseball relative to the palm of the hand." There is no dispute that this term should be construed as a means-plus-function limitation pursuant to 35 U.S.C. <section> 112, <paragraph> 6, and that the claimed function is "indicating the orientation of the baseball relative to the palm of the hand." The only dispute on appeal concerns identification of the corresponding structure.

shaped [2] The district court ruled that the corresponding structure included egg-indicia having "a slight taper at the portion of each indicia situated closest to the palm of the hand, and any equivalents of such structure." McGinley I at 1146. In contrast, FSI's position is that the claim limitation is not entitled to any range of equivalents whatsoever, on the basis that the written description of the

undisclosed 193 patent discloses only egg-shaped indicia with tapered ends, and that equivalents cannot be construed to be within the scope of a patent claim. In support for its position, FSI points out that the only orientation means explicitly described in the '193 patent is a slight taper to the finger placement indicia, which are to be understood as being shaped in the form of egg-shaped ovals by inspecting the figures of the '193 patent:
To further assist the student the indicia are shaped so as to indicate the relationship of the palm of the hand in grasping the ball. The portion of each indicia intended to be situated closest to the palm is slightly tapered thereby to assist the student in achieving correct orientation of the ball in the palm. %'193 patent, col. 5, ll. 16-22.

the [3] FSI's argument on this point is wholly without merit, for it misunderstands statute. Drafters of means-plus-function claim limitations are statutorily guaranteed a range of equivalents extending beyond that which is explicitly disclosed in the patent document itself:
*1348 An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.
35 U.S.C. <section> 112, <paragraph> 6 (1994) (emphasis added). We therefore affirm the district court's claim construction.

III Infringement

the [4] This brings us to FSI's cross-appeal from the district court's grant of McGinley's motion for summary judgment of infringement. At the summary judgment stage, the district court compared the asserted claims of the '193 patent as they had been construed in McGinley I to undisputed evidence concerning FSI's 2705 baseball. In the accused FSI 2705 baseball, the finger placement indicia are in shape of finger-like outlines that are blunted at the end furthest from the fingertips.

show Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, is that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). For purposes of the motion, "[t]he evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor." Anderson v. Liberty Lobby, Inc., 477

U.S.

[5] Upon reviewing the record before it at that stage of the litigation, the district court concluded that FSI had not demonstrated the existence of any genuine issue as to any material fact concerning infringement. Specifically, the finger-shaped markings on the accused FSI 2705 baseball were found by the district court to be functionally identical and structurally equivalent to the tapered egg-shaped indicia disclosed in the '193 patent: Although the markings on defendant's ball are shaped somewhat differently than those found on plaintiff's product, [FN1] the court concludes that the difference is insubstantial: an elongation of the finger indicia, coupled with "blunting" the ends of each mark, as opposed to tapering them, adds nothing of significance to the structure disclosed in plaintiff's patent specification. Both types of indicia show the student precisely how to grip the baseball, and the difference between the structure used to accomplish this function is, at best, an insignificant alteration.

record, FN1. We note that the district court incorrectly referred to "plaintiff's product" repeatedly in its memorandum and order granting summary judgment of infringement, where "plaintiff's asserted claims" were clearly meant to be referenced instead. See, e.g., McGinley II at 1224. Upon reviewing the we conclude that these erroneous statements were harmless, since there is no contention by any party that any significant differences exist between McGinley's commercial embodiment ("the RCIB") and relevant aspects of the asserted claims.

this McGinley II at 1224 (footnote not in original). We review de novo the district court's legal conclusion that summary judgment of infringement was warranted in case. Ethicon Endo-Surgery, Inc. v. United States Surgical Corp., 149 F.3d 1309, 1315, 47 USPQ2d 1272, 1275 (Fed.Cir.1998).

Instead, On appeal, FSI does not quibble with the district court's conclusion that the finger-shaped markings on the accused FSI *1349 2705 baseball are structural equivalents of the tapered egg-shaped indicia described in the '193 patent. FSI simply argues that the "means for orienting" limitation in the asserted claims is not entitled to a range of equivalents at all. Since we have already rejected that argument, FSI's cross-appeal on infringement fails as well. Moreover, our review of the record reveals that FSI did not present any nonconclusory evidence in opposition to McGinley's summary judgment of infringement which would tend to indicate that an artisan of ordinary skill would not consider the finger-shaped indicia on the accused FSI 2705 baseball to be structural equivalents of the tapered egg-shaped indicia explicitly described in the '193 patent. Therefore, we affirm the district court's grant of summary judgment of infringement.

IV Obviousness

a [6][7] A patent is invalid for obviousness if "differences between the subject matter sought to be patented and the prior art are such that the subject matter as having whole would have been obvious at the time the invention was made to a person ordinary skill in the art to which said subject matter pertains." 35 U.S.C. <section> 103(a) (1994). "Throughout the obviousness determination, a patent retains its statutory presumption of validity, see 35 U.S.C. <section> 282, and

the
States,
movant retains the burden to show the invalidity of the claims by clear and convincing evidence as to underlying facts." Rockwell Int'l. Corp. v. United
147 F.3d 1358, 1364, 47 USPQ2d 1027, 1031-32 (Fed.Cir.1998).

Co.,
[8][9] Although it is well settled that the ultimate determination of obviousness is a question of law, it is also well understood that there are factual issues underlying the ultimate obviousness decision. Richardson- Vicks Inc. v. Upjohn
122 F.3d 1476, 1479, 44 USPQ2d 1181, 1183 (Fed.Cir.1997). Specifically, the obviousness analysis is based on four underlying factual inquiries, the well-known Graham factors: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) secondary considerations, if any, of nonobviousness.
Graham
v. John Deere Co., 383 U.S. 1, 17-18, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966); Kegel Co., Inc. v. AMF Bowling, Inc., 127 F.3d 1420, 1430, 44 USPQ2d 1123, 1130 (Fed.Cir.1997).

were
At trial, FSI argued, inter alia, that the asserted claims of the '193 patent obvious in view of either Pratt alone, or in view of Pratt in combination with Morgan. FSI's obviousness theories are best summarized in its own words from its opening brief on appeal:

The only element of the asserted claims that is not clearly anticipated by the Pratt patent is the finger shaped marks that orient the ball with respect to the palm of the user's hand. However, this feature is obvious in light of the lines indicating finger placement on the drawings of the Pratt patent. Moreover, the concept of a set of finger marks to orient the ball is clearly taught in the

Morgan
patent. It would have been obvious to one of ordinary skill in the art to substitute the finger marks of the Morgan patent for the marks of the Pratt

patent.
Or, stated another way, it would have been obvious to place three sets of marks on the Morgan ball in light of the teaching of Pratt.

(i.e.,
In other words, FSI argued to the jury that the "missing element" in Pratt the "means for orientation") can be found either in the "phantom lines" of Pratt or in Figure 6 of Morgan. McGinley argued at *1350 trial that there was no motivation to combine the prior art as suggested by FSI, and that even if such a motivation to combine had been demonstrated, that the commercial success of both McGinley's RCIB and FSI's accused 2705 baseball constituted sufficient evidence of secondary considerations that would negate any prima facie showing of obviousness.

1,
In
The jury agreed with McGinley. Specifically, in the special verdict form used in this case, the jury answered three questions that are relevant to this appeal in favor of McGinley. First, the jury found that FSI had not proven by clear and convincing evidence that each of the elements of the invention defined in claims 2, 6 and 7 of the '193 patent is disclosed in Pratt. This was a factual finding.
re Beattie, 974 F.2d 1309, 1311, 24 USPQ2d 1040, 1041 (Fed.Cir.1992) ("What a reference teaches is a question of fact.").

a
Second, the jury found that FSI had not proven by clear and convincing evidence that any of the asserted claims were invalid as being obvious in view of Pratt alone. Finally, the jury found that FSI had not proven by clear and convincing evidence that any of the asserted claims were invalid as being obvious in view of combination of Pratt and Morgan. These latter two findings by the jury are

directed

jury's findings with respect to the underlying factual underpinnings. The parties do not object to the phrasing of the questions that were posed to the jury in the verdict form, nor do they challenge the district court's comprehensive jury instructions on obviousness.

In its motion for JMOL, FSI argued that no reasonable jury could have concluded that the asserted claims were not obvious in view of either Pratt alone or in view of Pratt in combination with Morgan. The district court agreed, and granted FSI's motion for JMOL. Specifically, the court found that "no reasonable jury could conclude that the motivation to combine Pratt and Morgan did not exist."

Moreover,

the district court "simply [did] not believe that the evidence regarding secondary considerations [was] sufficient to overcome its firm conclusion that, as a matter

of

law, plaintiff's patent is invalid as obvious in light of Pratt or the combination of Pratt and Morgan." In sum, the district court concluded that "in light of Pratt alone, as well as in light of Pratt and Morgan in combination, the claims set

forth

in the ' 193 patent are invalid as obvious." [FN2]

FN2. We interpret this statement as referring solely to the asserted claims.

[10][11] We review a grant of JMOL without deference to the district court. *Tex. Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1563, 39 USPQ2d

1492,

1496 (Fed.Cir.1996). Entry of JMOL is inappropriate unless the jury's verdict is unsupported by substantial evidence or premised on incorrect legal standards. *Applied Med. Res. Corp. v. United States Surgical Corp.*, 147 F.3d 1374, 1376, 47 USPQ2d 1289, 1290-91 (Fed.Cir.1998); accord *Jackson v. City of Albuquerque*, 890 F.2d 225, 230 (10th Cir.1989); *J.I. Case Credit Corp. v. Crites*, 851 F.2d 309,

311

(10th Cir.1988) (noting that JMOL is appropriate "only if the proof is all one way or so overwhelmingly preponderant in favor of the movant as to permit no other rational conclusion").

[12] In analyzing the correctness of a JMOL overturning a jury verdict of nonobviousness, we must consider the facts before the district court, and then determine whether the district court's ultimate judgment on obviousness is correct as a matter of law. *Richardson-Vicks*, 122 F.3d at 1479, 44 USPQ2d at 1183. In re-creating the facts as they may have been found by the jury, and in applying the Graham factors to the evidence of record in this case, we assess the evidence

in

the light most favorable to the verdict winner, in this case *McGinley*. *Id.*;

accord

Lucas v. Dover Corp., 857 F.2d 1397, 1400 (10th Cir.1988) ("In determining whether the grant of a motion for [JMOL] is appropriate, the court must view the evidence and indulge all inferences in favor of the party opposing the motion and cannot weigh the evidence, consider the credibility of witnesses or substitute its

judgment

for that of the jury.") (internal quotations omitted).

[13] Whether a patent claim is obvious under section 103 depends upon the answer to several factual questions and how the factual answers meld into the legal

conclusion

of obviousness vel non. In this case, we think that the central question is

whether

there is reason to combine the Pratt and Morgan references, because if the references are properly combined, it is certain that the claims are prima facie

invalid for obviousness. If the jury was entitled to conclude that these two references should not be combined, then the asserted claims of the '193 patent cannot be invalid for obviousness in the light of the proposed combination. If those claims are not invalid under a combination of Pratt and Morgan, then, as a matter of logic, those claims cannot be invalid in the light of Pratt alone. We thus turn first to the issue of whether Pratt and Morgan must be combined.

[14] The genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some "teaching, suggestion or reason" to combine cited

references.

Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579, 42 USPQ2d 1378, 1383 (Fed.Cir.1997). When the art in question is relatively simple, as is the

case

here, the opportunity to judge by hindsight is particularly tempting.

Consequently,

the tests of whether to combine references need to be applied rigorously. See In

re

Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.Cir.1999), limited on

other

grounds by In re Gartside, 203 F.3d 1305, 53 USPQ2d 1769 (2000) (guarding against falling victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher).

[15][16][17][18] Whether a motivation to combine prior art references has been demonstrated is a question of fact. Winner Int'l Royalty Corp. v. Wang, 202 F.3d 1340, 1348, 53 USPQ2d 1580, 1586 (Fed.Cir.2000). The assessment of whether to combine references in a given case has sometimes been viewed conceptually as a subset of the first Graham factor, the scope and content of the prior art. See, e.g., id.; Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH, 139 F.3d 877, 881-

83,

886, 45 USPQ2d 1977, 1981-82, 1985 (Fed.Cir.1998). Although that view is not incorrect, accurate assessment of whether to combine references may require attention to other Graham factors. For example, the level of skill in the art may inform whether the artisan would find a suggestion to combine in the teachings of

an

exemplar of prior art. Where the level of skill is high, one may assume a keener appreciation of nuances taught by the prior art. Similarly, appreciation of the differences between the claims in suit and the scope of prior art references--a matter itself informed by the operative level of skill in the art--informs the question of whether to combine prior art references. At bottom, in each case the factual inquiry whether to *1352 combine references must be thorough and

searching.

There is no question here that FSI presented sufficient evidence at trial from which a jury could have decided that one of ordinary skill in this case would have been motivated to combine Pratt and Morgan to produce a prima facie obvious invention. Specifically, FSI argued to the jury that the only elements of the asserted claims that are not clearly anticipated by Pratt are the finger-shaped marks that orient the ball with respect to the palm of the user's hand. Referring to the "phantom lines" in Pratt as suggestive of finger placement on the ball, FSI argued that one of ordinary skill would have been motivated to substitute the

finger

marks from the Morgan ball for the circular marks on Pratt, or alternatively to place three sets of marks on the Morgan ball in the light of Pratt's teachings.

In

addition, FSI argued that one of ordinary skill would have known to add the finger orientation means of the Morgan patent to Pratt by "filling in" the phantom lines

in

Pratt's drawings and treating them as finger orientation means.

But the jury did not hear a one-sided case on the issue of obviousness generally, and in particular on whether to combine Pratt and Morgan. As FSI conceded at oral argument, McGinley presented reasons to the jury to reject a combination of the references. McGinley argued many grounds to support his contention that the

asserted claims are not obvious in the light of Pratt and Morgan. To counter FSI's claim that those references should be combined to render McGinley's "means for orientation" obvious, McGinley pointed to specific differences between the prior art and the asserted claims. For example, Morgan does not disclose the required markings for at least three different kinds of pitches, as do the asserted claims. And Morgan does not disclose markings on a real baseball, as do Pratt and the asserted claims. We recount the gist of this testimony below.

The jury heard from Mr. Charles Quinn, FSI's vice president of marketing and corporate representative at trial. Quinn testified in detail as to the express teachings of Pratt and Morgan, and as to the differences between these references and the asserted claims. For example, he conceded that the markings on the baseball in Pratt's invention were circular, and therefore incapable of indicating orientation. Trial Tr. Vol. 2, p. 140. He also acknowledged that the "phantom lines" in Pratt's drawings were not actually markings on a baseball. Trial Tr. Vol. 2, pp. 177-78. Quinn also pointed out that Morgan did not discuss implementing a baseball training device using a regulation baseball. Trial Tr. Vol. 2, pp. 172-73. Moreover, he acknowledged that Morgan taught only the provision of indicia for throwing a single type of pitch on each training device, instead of three sets of indicia as required in the asserted claims. Trial Tr. Vol. 2, p. 145.

The jury also heard from Mr. Richard Stitt, the attorney who prosecuted the '193 patent and the fact that Pratt and Morgan were considered by the PTO throughout the entire pendency of McGinley's application. He confirmed that the "phantom lines" in Pratt's drawings were not actually marked on a baseball. Trial Tr. Vol. 3, p. 56. Stitt also pointed out that the PTO never rejected the asserted claims as obvious in view of Pratt, and that it was never suggested by the PTO that the phantom lines of Pratt could easily be transferred to the actual baseball to arrive at McGinley's *1353 claimed invention. Trial Tr. Vol. 3, pp. 57-58.

Stitt testified that the PTO never rejected McGinley's claims by saying that one could substitute the "elongate finger-shaped markings" shown in Figure 6 of Morgan in place of the "circular dots" in Pratt. Trial Tr. Vol. 3, p. 63. He also pointed out that the PTO could have issued an obviousness rejection of the asserted claims based on a theory of transferring Pratt's phantom lines onto the baseball, but never did so. Trial Tr. Vol. 3, p. 185. Similarly, he testified that the PTO could have issued an obviousness rejection of the asserted claims based on a theory of combining Pratt with Morgan, but never did so either. Trial Tr. Vol. 3, p. 186.

Stitt also testified that he flew to the Patent Office in Washington, D.C., with Pratt and McGinley for an interview with the Examiner to discuss the differences between and Morgan and the claimed invention. Trial Tr. Vol. 3, pp. 142-145. Finally, he explained in detail why neither Pratt nor Morgan alone or in combination with each other would provide the claimed "means for orientation." Trial Tr. Vol. 3, pp. 150-52.

In addition, McGinley relied heavily on the presumption of validity to which his patent is entitled by the terms of 35 U.S.C. <section> 282, mainly in the context of Stitt's tutorial concerning how McGinley's patent was prosecuted, and in McGinley's

opening statement and closing argument to the jury. As noted above, throughout the trial, McGinley pointed out that both the Pratt and Morgan references were before the examiner who tested McGinley's patent for validity. Indeed, those two references were discussed in an interview between the applicant and the examiner. The examiner rejected McGinley's claims as anticipated by Pratt, and made no mention of any concern as to obviousness in view of Pratt alone or of a combination of Pratt and Morgan. The Board of Patent Appeals and Interferences reversed the examiner's anticipation rejection, holding that Pratt failed to teach McGinley's means for orienting the baseball relative to the palm of the hand. In due course, McGinley's patent issued and became clothed with the statutory presumption of validity, with no obviousness challenge having been mounted against it, either on the basis of Pratt alone, or of Pratt in combination with Morgan.

The jury in this case was expressly charged that the patent in suit is entitled to the presumption of validity, and that FSI could only overcome that burden with clear and convincing evidence to the contrary. It is well established in our case law that FSI's burden in this case was especially heavy:

When no prior art other than that which was considered by the PTO examiner is relied on by the attacker [FSI], he has the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid patents.

In some cases a PTO board of appeals may have approved the issuance of the patent. American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1359, 220 USPQ 763, 770 (Fed.Cir.1984), cert. denied, 469 U.S. 821, 105 S.Ct. 95, 83 L.Ed.2d 41 (1984).

[19] Perhaps McGinley's best argument to save his claims from prima facie obviousness in the light of Pratt and Morgan is his contention that those references together teach away from their combination. *1354 We have noted elsewhere, as a "useful general rule," that references that teach away cannot serve to create a prima facie case of obviousness. In re Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130 (Fed.Cir.1994). If references taken in combination would produce a "seemingly inoperative device," we have held that such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness. In re Spinnoble, 405 F.2d 578, 587, 160 USPQ 237, 244, 56 C.C.P.A. 823 (1969) (references teach away from combination if combination produces seemingly inoperative device); see also In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed.Cir.1984) (inoperable modification teaches away).

McGinley argues in his brief that Pratt itself teaches away from combining the finger orientation of Morgan, because Pratt, by teaching only the placement of finger tips on the baseball, leads away from placing a full finger orientation on the ball. Such may be the case, but we have no assurance that the jury heard that argument. At oral argument in this court, however, FSI confirmed that McGinley argued to the jury that adding the finger marks of Morgan to Pratt's baseball, by "filling in" the phantom marks to create structure that defines orientation as claimed, would require obliteration of the claimed rotation arrows, a feature that is necessary in order to permit the Pratt invention to operate properly. FSI also confirmed at oral argument that the jury heard McGinley's argument that to combine the finger placements of Morgan onto the Pratt ball would also render the Pratt ball inoperable, by eliminating the multi-colored equatorial band, a claimed feature of

the Pratt patent also required for successful operation of Pratt's invention. We are satisfied that McGinley presented sufficient evidence as well to counter FSI's alternative argument that it would have been obvious to place three sets of marks on the Morgan ball in light of the teaching of Pratt. First, a reasonable jury could have determined from examining the Morgan reference that the finger placement indicia on Morgan are too large to allow the inclusion of more than a single set of markings. This point is important, because Morgan expressly

requires markings on the ball to accommodate the placement of two full fingers and a thumb to simulate throwing a single pitch. The jury could have certainly concluded that one of ordinary skill would not attempt to place markings for two additional pitches on Morgan's ball. Two more sets of markings as shown by Morgan itself would require markings for two additional sets of fingers and thumbs. On the

other hand, two sets of markings as shown by Pratt would lead to confusion as to the correct means for orientation on Morgan's ball. Any such configurations, i.e., Morgan's invention with markings for throwing three different pitches, would

risk, if not achieve, obliteration of the clear and unmistakable markings shown on Morgan's ball to teach the throwing of a single curving pitch. Moreover, a reasonable jury could have considered that all of the embodiments described and illustrated in the Morgan reference are expressly limited to teaching a student pitcher to throw a baseball with a "particular curve or break," and that none of the embodiments discuss or suggest using a conventional baseball as opposed to a hollow shell comprising two metallic or plastic hemispheres glued or otherwise bonded together. The jury also could have concluded that Morgan-- with its full finger and thumb imprint markings on the ball--teaches away from a means for orientation using the smaller tear-drop markings disclosed by McGinley or the *

1355 small truncated finger-shaped markings used in FSI's accused baseballs.

FSI [20] Given the strength of the teaching away point, we think it remarkable that

jury's makes no attempt whatsoever in its brief to counter McGinley's argument. The verdict that the claims in suit are not obvious is supported by the evidence brought forward by McGinley to resist FSI's contrary evidence. Here we have the classic example of sufficient evidence to support each position argued to the jury. The

key issue, namely what the references teach and whether they teach the necessity of combination or the requirement of separation, is a fact issue. When the jury is supplied with sufficient valid factual information to support the verdict it reaches, that is the end of the matter. In such an instance, the jury's factual conclusion may not be set aside by a JMOL order.

be Given the multiple bases upon which the jury's verdict in favor of McGinley can

that sustained over FSI's arguments for combining the references, we must conclude

FSI fares no better in arguing a combination of Pratt into Morgan than it does in arguing a combination of Morgan into Pratt. The jury was thus entitled to reach its verdict of nonobviousness on the ground that one of ordinary skill in the art would not deem the asserted claims of the '193 patent obvious in light of Pratt

and Morgan in combination. That being the case, it is illogical to think that one of ordinary skill in the art would have deemed McGinley's claims obvious in the

light of Pratt alone. If one of ordinary skill is not taught by Morgan to extend

Pratt's circular markings into the phantom lines, that person would not be taught by the phantom lines alone to do so.

Nonetheless, we think the district court erred as well in its decision that McGinley's asserted claims were obvious as a matter of law in view of Pratt

alone. A21-22. According to the district court's reasoning, no reasonable jury could

have failed to conclude that an ordinarily skilled artisan would have been motivated to transfer the finger-shaped "phantom lines" shown in the Pratt reference onto the actual Pratt baseball itself, thus providing the missing "means for orientation" that is admittedly otherwise missing in Pratt. It should be noted that the "phantom lines" shown in Pratt are virtually identical to the finger-shaped markings on Fig. 6 of the Morgan reference, except that the Morgan markings are "filled-in" and actually marked on the ball. Therefore, many of the arguments mentioned above with respect to Morgan apply with equal force with respect to the Pratt phantom lines. Specifically, as FSI conceded at oral argument before this court, the jury heard McGinley's argument that transferring large finger-shaped markings (such as those illustrated in Fig. 6 of Morgan or in the phantom lines of Pratt) would render the Pratt invention inoperable by interfering with the multi-colored equatorial band. Thus, according to this evidence, one of ordinary skill in designing baseballs for use as pitching trainers would not be oriented to modify Pratt by filling in the phantom lines to express palm-finger placement on the ball. As mentioned above, the jury also heard extensive testimony concerning the prosecution history of the '193 patent, including the critical facts that (1) Pratt was before the PTO during the entire pendency of the patent application, and (2) although the PTO continued to reject the asserted claims as anticipated by Pratt until McGinley won an appeal before the Board on that point, the PTO never rejected the asserted *1356 claims as obvious in view of Pratt alone. Surely, relying on the presumption of regularity that applies to all administrative agencies such as the PTO, the jury could have reasonably concluded that if the PTO believed that an obviousness rejection based on Pratt alone was warranted, such a rejection would have been promptly been made. Also, just as was the case with the Morgan markings, the jury could have reasonably concluded from an examination of the references that the Pratt phantom lines are so large that it would not be feasible to include three sets of them on a single baseball, as required by the asserted claims. Because substantial evidence supports the jury's implicit factual finding that no motivation to modify Pratt in that manner has been demonstrated in this case, the district court's ruling that Pratt alone renders the asserted claims obvious as a matter of law was erroneous. Due to the "black box" nature of the jury's verdict, it is impossible to determine which of the above pieces of evidence, alone or in combination, carried the day in the jury room, and how much weight was assigned to each piece. All that can be said with certainty is that--as a whole--the evidence enumerated above (all of which was admittedly before the jury) constitutes substantial evidence to support the jury's verdict. We recognize the concerns of the dissenting opinion that it is difficult to sort out the weight to be given factual determinations in an obviousness inquiry from the degree to which the district court should override permissible found-facts to sum-up the legal conclusion of obviousness vel non. But when a dispositive element of the factual equation, here whether to combine or modify key references, so clearly could have been decided by the jury in McGinley's favor, it is not our place to elide the vagaries of a black box jury verdict by overriding the jury's decision. Our law does not compel the use of special verdicts in these cases, and so long as the parties are content to give the jury

unfettered room to operate on dispositive factual issues within the scope of a general verdict request, we must be mindful of our role as an appellate court and respect the verdict reached, notwithstanding what may seem to some to be an invention of little novelty.

For the reasons set forth above, we conclude that the district court erred when ruled on JMOL that no reasonable juror could have ruled that FSI failed to make a case of obviousness by clear and convincing evidence.

V

Denial of McGinley's Motion to Amend Complaint

[21] More than one year after McGinley had filed its initial complaint against in this case, and almost two months after the deadline that had been set by the district court for filing a motion to join additional parties, McGinley sought to add his own company and oral exclusive licensee, S.C. Products, Inc. ("SCP"), as a plaintiff. Apparently, McGinley and SCP are "one and the same," and McGinley is sole shareholder of SCP. However, in a technical corporate sense, the RCIB was sold by SCP, not by McGinley.

The district court denied McGinley's motion, and articulated the following bases for its decision: The court, in its May 10, 1999 telephone conference, found that both parties have been equally dilatory in preparing this case for trial, and therefore denied the plaintiff's motion for an extension of the deadline to file amended pleadings.

*1357 plaintiff's current motion to amend comes nearly two months after the deadline for such motions. The court believes that, had the plaintiff diligently sought to bring the matter to trial, the plaintiff could have brought this motion to amend within the deadline specified in the scheduling order. For example, the plaintiff did not complete depositions of defendant and its representatives--the very depositions on which he in part bases his motion to amend--until the week of May 17, 1999, some six weeks after the deadline for motions to amend.

[22][23][24] A district court's decision to grant or deny a motion for leave to join a party involves a procedural question that raises no special issues relating to patent law, and therefore Tenth Circuit law applies in this case. Sun-Tek Indus., Inc. v. Kennedy Sky Lites, Inc., 856 F.2d 173, 175, 8 USPQ2d 1154, 1156 (Fed.Cir.1988). In the Tenth Circuit, this issue is reviewed for an abuse of discretion. Scheufler v. Gen. Host Corp., 126 F.3d 1261, 1270 (10th Cir.1997).

this case, we can safely conclude that the district court did not abuse its discretion. Trial courts are given broad latitude in managing and scheduling

and therefore the stated bases for the district court's decision to deny

McGinley's motion are entirely reasonable. See Foman v. Davis, 371 U.S. 178, 182, 83 S.Ct. 227, 9 L.Ed.2d 222 (1962) (stating that undue delay may form a proper basis for a court to exercise its discretion to deny a plaintiff's motion to amend its complaint).

VI

Denial of FSI's Motion for New Trial on Willfulness

[25] FSI argued at trial that it did not willfully infringe the '193 patent on basis that it allegedly had a reasonable, good faith belief that the patent was invalid. FSI did not rely upon advice of counsel to demonstrate this belief. Instead, FSI sought to demonstrate its good faith belief through the testimony of its corporate representative and vice president of marketing, Charles Quinn, who

was
the
to testify as to FSI's understanding of the Pratt and Morgan patents. At trial,
district court prevented Quinn from testifying as an ordinarily skilled artisan in
the invalidity portion of the trial, since he was not qualified as an expert under
Federal Rule of Civil Procedure 26.

in
After the jury verdict, along with its motion for JMOL of invalidity, FSI argued
the alternative that it was entitled to a new trial on willfulness, without citing
any particular basis for granting the motion, other than referring to evidence
presented at trial tending to show that FSI's infringement was not willful. In

its
briefs on appeal, FSI argues for the first time that it is entitled to a new trial
because it was denied a fair opportunity to present its allegedly "key piece of
exculpatory evidence" at trial (i.e., Quinn's testimony as to FSI's understanding
that the '193 patent was invalid in view of Pratt and Morgan). The district court
denied the motion for a new trial on willfulness, stating as follows:

determination,
[E]ven if the Federal Circuit were to reverse this court on its JMOL
the jury's willfulness finding should not be set aside nor should defendant be
entitled to a new trial. The crux of this opinion is that the '193 patent is
obvious as a matter of law; if the court is deemed to be incorrect in that
conclusion, that is, if there actually was a question of fact for the jury on
obviousness, then, as plaintiff discusses in his responsive papers, the evidence
presented supports the jury's conclusion that the infringement was willful and,
also, the verdict was not so contrary to *1358 the weight of that evidence as to
mandate a new trial.

to
[26] The denial of FSI's motion for a new trial is a procedural issue not unique
patent law, and is therefore reviewed in this case under the Tenth Circuit's abuse
of discretion standard. Smith v. Ingersoll-Rand Co., 214 F.3d 1235, 1242 (10th
Cir.2000); accord Shearing v. Iolab Corp., 975 F.2d 1541, 1544, 24 USPQ2d 1133,
1136 (Fed.Cir.1992).

We conclude that the district court did not abuse its discretion in denying FSI's
motion for a new trial. Because FSI failed to make any offer of proof under Rule
103 of the Federal Rules of Evidence, nothing in the record indicates what Quinn
would have said on the stand if asked. Sorensen v. City of Aurora, 984 F.2d 349,
355 (10th Cir.1993) (finding no abuse of discretion in denying new trial where

party
failed to establish sufficient factual record for appellate court to consider
propriety of excluding testimony). Moreover, we are satisfied that--even without
being allowed to present Quinn's allegedly exculpatory evidence--FSI took

advantage
of its fair opportunity to present evidence concerning FSI's independent
development
of the accused 2705 baseball and its alleged acts of good faith to the jury.

VII Conclusion

with
For the reasons stated above, we reverse the grant of JMOL in favor of FSI and
order the jury's verdict reinstated. We leave undisturbed, however, the district
court's other judgments, rulings, and orders on appeal, thereby affirming the
remaining questions raised by McGinley and the cross-appeals presented by FSI. The
case is returned to the district court for further proceedings not inconsistent
this opinion.

Costs

No costs.

REVERSED-IN-PART AND AFFIRMED-IN-PART

MICHEL, Circuit Judge, dissenting.

Because I conclude that the Pratt patent, alone, renders the patented invention obvious as a matter of law, I would affirm. I am especially troubled by the implication I see in the majority's opinion that a general jury verdict on the

legal

question of obviousness is essentially immune from review by the trial court on JMOL, or by this court on appeal.

The issue presented in this appeal derives from the common, if unfortunate, practice of allowing the jury to render a general verdict on the ultimate legal conclusion of obviousness without requiring express findings on the underlying factual issues through a special verdict or special interrogatories under Fed.R.Civ.P. 49. Nevertheless, since the inception of our court, we have

recognized

that a court may submit this legal question to a jury and that doing so by general verdict rather than by Rule 49 is not ordinarily an abuse of discretion. *Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 1515, 220 USPQ 929, 937 (Fed.Cir.1984); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1547-48, 220 USPQ 193, 197 (Fed.Cir.1983). We have emphasized, however, that "[t]here is no

question

that the judge must remain the ultimate arbiter on the question of obviousness." *Railroad Dynamics*, 727 F.2d at 1515, 220 USPQ at 937; see also *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1479, 44 USPQ2d 1181, 1183 (Fed.Cir.1997)

("That

an obviousness determination stands upon the relevant facts of the case does not convert the ultimate conclusion of obviousness from one of law into one of

fact.").

*1359 The difficulty presented in this appeal is how to separate the role of the jury to find facts (with these findings binding on this court, as well as the

trial

court, so long as they are supported by at least substantial evidence) from the

role

of trial judges in reaching, or for us freely reviewing, the ultimate legal conclusion of obviousness, vel non. In this case, the verdict form tells us only that the jury found the claimed invention nonobvious in light of Pratt and/or Morgan, with no identification of the jury's resolution of genuine disputes over material factual issues. We must therefore imply such factual findings, under the legal presumption that the jury found all facts necessary to support its verdict

in

favor of McGinley. *Railroad Dynamics*, 727 F.2d at 1516, 220 USPQ at 937 ("[W]hen

a

jury returns a general verdict, the law presumes the existence of fact findings implied from the jury's having reached that verdict.").

When faced with a general verdict of nonobviousness or obviousness, the

categories

of facts the court must imply concern the scope and content of prior art; what a prior art reference teaches; the differences between the claimed invention and

the

prior art; the level of ordinary skill in the prior art; and objective evidence

of

nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 14, 86 S.Ct. 684, 15

L.Ed.2d

545, 148 USPQ 459, 467 (1966); *Tec Air, Inc. v. Denso Mfg. Michigan Inc.*, 192

F.3d

1353, 1359, 52 USPQ2d 1294, 1298 (Fed.Cir.1999). In cases such as this where a single prior art reference is alleged to render the claimed invention obvious,

there

must be a sufficient showing of a suggestion or motivation for any modification of the teachings of that reference necessary to reach the claimed invention in order

to support the obviousness conclusion. SIBIA Neuroscis., Inc. v. Cadus Pharm. Corp., 225 F.3d 1349, 1356, 55 USPQ2d 1927, 1931 (Fed.Cir.2000); B.F. Goodrich Co. v. Aircraft Braking Sys. Corp., 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed.Cir.1996)

itself, . This suggestion or motivation may be derived from the prior art reference from the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. SIBIA, 225 F.3d at 1356, 55 USPQ2d at 1931.

implied, While the trial court must defer to the jury's factual findings, actual or the court nonetheless has the duty, when presented with a motion for JMOL following a general verdict on obviousness, to review the factual findings for substantial evidentiary support, and the ultimate conclusion on obviousness for legal correctness. Railroad Dynamics, 727 F.2d at 1513, 220 USPQ at 936 ("The moving party is entitled to JNOV when the court is convinced: (1) that reasonable persons could not in light of that evidence have found the facts necessary to support the jury's verdict; or (2) that the facts properly found cannot in law support that verdict."). In the present case, the trial court dutifully performed this analysis, citing our precedent, and concluded that no reasonable jury could find that Pratt did not render McGinley's claimed baseball obvious. I agree.

indicating The only arguable difference between Pratt's and McGinley's claimed marked baseballs for student pitchers is that Pratt purportedly lacks a "means for indicating the orientation of the baseball relative to the palm of the hand," a limitation separately claimed by McGinley. U.S. Patent No. 5,407,193, col. 5, 11. 41-42. There has been no admission, as the majority suggests, that Pratt does not disclose a "means for orienting." The structures corresponding to this means-plus-function limitation in McGinley's claimed baseball are sets of finger markings, shaped like tapered eggs, with the direction of the *1360 taper indicating the proper orientation of the ball in the pitcher's hand. That is, the points of the tapers, by extension, lead approximately to the center of the palm. The fingertip placement markings illustrated in Pratt's diagrams, by contrast, are simple circles with no taper, and thus do not point toward the palm.

ball, <- Image delivery not available with current Options format setting. ->

3, The jury did indeed hear testimony to the effect that Pratt's rounded fingertip placement indicia would leave a student pitcher confused as to how to grip the ball, as the pitcher would be unsure whether to grip the ball on only one of its hemispheres, or rather to grasp the ball fully across its equator. Mr. Richard Stitt, the attorney who prosecuted the '193 patent, testified that the symmetry of Pratt's fingertip markings would frustrate gripping the ball " 'cause if the opposite side of that ball looks the same as the side we're looking at, you don't know which to approach it from, and that's a critical question." Trial Tr., Vol. 3, p. 201. Contrarily, Mr. Stitt testified that "if we had a--a taper on one end of this circle, I would know to approach the ball." Trial Tr. Vol. 3, p. 218.

teachings *1361 Such testimony, in my view, is a nullity because it contradicts the of the Pratt patent, which by its very markings necessarily discloses a means for orienting a pitcher's fingers on the ball "relative to the palm." As illustrated here, Pratt's diagrams show multiple sets of fingertip placement indicia, with a single set comprising two circles situated near each other (described in the specification as markers for the pitcher's forefinger and second finger) and a third spot somewhat removed from the other two (described as a marker for the thumb).

As

a matter of geometry, there are only two ways for a pitcher to place his or her thumb, forefinger, and second finger on these three spots (barring finger-crossing).

One way is to pinch the near hemisphere of the baseball with one's fingertips. The other way is to grasp the ball near the palm of one's hand, wrapping one's fingers across the equator of the ball (i.e., the way a baseball is always thrown).

Pratt's written description tells us that people of ordinary skill in this art (and student pitchers) know generally how to hold and throw baseballs. The patent states that, for a fastball, the ball is thrown with "the usual forearm motion." U.S. Patent No. 2,925,273, col. 2, ll. 25-26. A fingertip grip on only one hemisphere of the ball would be unworkable, as for a curveball, the patent recites using a "tighter grip," and throwing the ball with a "conventional wrist snap," so as to impart a "maximum spin" to the ball. Id. at col. 2, ll. 53-54. To do so, the forefinger and second finger must "extend across two sections of the stitches of the seam," such that the thumb "extends along the seam." Id. at col. 2, ll. 50-52. These instructions, read in view of the finger placement indicia, reduce the number of possible palm orientations to one: the ball-in-palm grip. Because Mr. Stitt's testimony contradicts the express teachings of Pratt, his testimonial evidence is entitled to no weight. I conclude that the express teachings of Pratt, as a matter of law, disclose to persons of ordinary skill a means for orienting the ball in the pitcher's palm.

Of course, in the context of a means-plus-function claim, the invalidating prior art must disclose not simply a means for achieving the desired function, but rather the particular structure recited in the written description corresponding to that function, or an equivalent thereof. In re Donaldson Co., Inc., 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1849 (Fed.Cir.1994). To this end, the Pratt patent discloses more than just circular fingertip markings, as his diagrams also display "phantom lines" (which do not appear on the actual ball covered by the patent) extending tangentially from the fingertip placement circles in the direction that a pitcher's fingers should be placed. FSI argues here, as below, that these phantom lines would have taught skilled artisans to extend tangentially Pratt's circular markings to give them directionality.

At trial, Mr. Stitt discounted the importance of these phantom lines, testifying that "[t]hey don't have anything to do with the invention." Trial Tr. Vol. 3, p. 183. This remark was legally incorrect, because although the phantom lines do not appear on Pratt's patented ball, they do comprise part of Pratt's disclosure. See In re Fritch, 972 F.2d 1260, 1264, 23 USPQ2d 1780, 1782 (Fed.Cir.1992) ("It is well settled that a prior art reference is relevant for all that it teaches to those of ordinary skill in the art."). McGinley also argues in his briefing that adopting the phantom lines from Pratt would be unworkable, because these lines would be too long and would obscure other markings on the baseball. The majority accepts this argument. But absolutely no trial testimony--none--*1362 suggests that Pratt's phantom lines are too long, or that their length as shown in the drawings would have dissuaded a skilled artisan from shortening the finger placement indicia as necessary to avoid obscuring any other markings. Mere attorney argument is no substitute for evidence of record. To support its holding (and its statement that the issue of motivation to modify Pratt's lines into McGinley's tapers "so clearly

could have been decided by the jury in McGinley's favor"), the majority combines testimony discussing the elongated finger grooves from Morgan with the testimony concerning the circular fingertip placement markings of Pratt. But by importing testimony regarding Morgan into its Pratt analysis, the majority appears to contradict its own holding that these references are not combinable. Moreover, putting aside the lack of evidence on this point, it hardly matters that the

phantom lines as shown are longer than they need be if they were actually drawn onto the ball. An artisan need not copy the lines precisely as shown, but instead would know to optimize the length of the lines to fit the constraints of the other marking on the ball. See *In re Baird*, 16 F.3d 380, 383, 29 USPQ2d 1550, 1552 (Fed.Cir.1994) ("[A] reference must be considered not only for what it expressly teaches, but also for what it fairly suggests.") (quoting *In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (1979)). Such a design variation would be routine in the baseball design art.

Presumably, the jury found that the phantom lines depicted in Pratt's diagrams would not have motivated a reasonable artisan to elaborate on Pratt's circular fingertip placement indicia and break their symmetry. However, the only trial testimony supportive of this finding--i.e., Stitt's comment that the phantom lines have nothing to do with the invention--is legally incorrect. Aside from this

remark, and testimony concerning the Morgan patent (which the majority finds to be non-analogous), there is simply no evidence, let alone substantial evidence, in support of the jury's implicit finding. Moreover, this implicit finding is contradicted by the disclosures of Pratt, itself. Pratt clearly contemplated the possibility that the reader of his patent might not immediately appreciate the proper orientation of a pitcher's fingers--that is why he added the phantom lines

to his drawings. By including these lines in his disclosure, Pratt imposed directionality on his circular markings in the drawings and necessarily communicated to those in his field a suggestion for reshaping the circular fingertip placement indicia accordingly. To the extent the jury's implicit findings are to the contrary, I find them unsupported by substantial evidence and contrary to Pratt's express and graphic disclosures. To the extent the jury rested its conclusion on such findings, it was legally incorrect.

It is true that the jury found that the Pratt patent does not anticipate McGinley's invention. I do not dispute that the differences between Pratt's circular indicia and McGinley's tapered, egg-shaped indicia, may be sufficient to support the jury's non-anticipation verdict. But obviousness is different. It remains the province of the court to determine, whether in light of all the facts properly, if only implicitly, found by the jury, the claimed invention would have been obvious. *Richardson-Vicks*, 122 F.3d at 1479, 44 USPQ2d at 1183; *Railroad Dynamics*, 727 F.2d at 1515, 220 USPQ at 937. We of course must view all supportable facts as found in favor of McGinley, the verdict winner and non-movant. But it is undeniable (by looking at Pratt's placement of the circular markings, and the accompanying description)*1363 that Pratt discloses a means for orienting a pitcher's fingers around the ball "relative to the palm." Moreover, the phantom lines suggest altering Pratt's circular markings to provide them with directionality, and to break the symmetry of the circular fingertip indicia. I acknowledge that there are differences between the scope and content of the prior art and the claimed invention. But this is where the legal analysis, as opposed to the fact analysis, begins. It is the role of the court to assess whether in light of these

differences

and the suggestion to modify the teachings of Pratt, the claimed invention would have been obvious. Viewing all these factual considerations in context, I cannot shake the conviction that a ball designer of even minimal skill in the art would have found it blatantly obvious to modify Pratt's circles (with their phantom lines), and reshape them into tapered eggs. Nor do McGinley's purportedly

fabulous

sales change my conclusion, because there is no evidence that these sales are due

to

the markings on the ball, as opposed to Roger Clemens' endorsement, or

advertising.

Accordingly, I conclude that McGinley's patent was proven invalid for obviousness.

I am concerned about far more important effects of today's ruling than whether McGinley's patent, although invalid, stands to menace still other baseball competitors. Rather, I am concerned that after reading the majority opinion,

trial

courts and our panels will hereafter consider such general verdicts on obviousness immune from meaningful review and that serious legal errors by juries will thus go uncorrected. The result will be that defective patents will remain to threaten

all

competitors in an industry. Indeed, I think today's appeal represents just such a case. More may follow. It is rare to see such a compelling case of obviousness, and yet more surprising to find our supposedly de novo review so limited, despite our settled case law that a jury's ultimate conclusion on obviousness is a legal question freely reviewable by judges. I therefore respectfully dissent.

Briefs and Other Related Documents (Back to top)

- 2001 WL 34373120 (Appellate Brief) Response of Plaintiff-Appellant to Combined Petition for Panel Rehearing and Rehearing En Banc (Oct. 03, 2001)

- 2001 WL 34373121 (Appellate Brief) Reply Brief for Defendant-Cross-Appellant Franklin Sports, Inc. (Jan. 04, 2001)

- 2000 WL 34230043 (Appellate Brief) Reply Brief of Plaintiff-Appellant Michael L. McGinley (Dec. 18, 2000)

- 2000 WL 34230044 (Appellate Brief) Appeal Brief for Defendant-Cross-Appellant (Nov. 07, 2000)

- 2000 WL 34230042 (Appellate Brief) Brief of Plaintiff-Appellant Michael L. McGinley (Aug. 25, 2000)

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